

AMENDMENTS TO THE CLAIMS

Before claim 1, change Patent Claims to WE CLAIM:

Cancel claims 1-9 without prejudice or disclaimer of the subject matter therein and substitute new claims 10-18 therefor:

Claims 1-9 (cancelled)

10. (new) A device for calibration of a mass flow sensor (14) comprises a flow channel and a holder for the mass flow sensor in the flow channel, the device having at one end a connection to a pump (32), wherein the calibration device further comprises an adjustable throttle device (24, 26) located between the sensor holder the pump connection, the throttle device is adjustable during a calibrating operation on the basis of a predetermined time/displacement profile by means of a control device and, during operation of the pump, the throttle device generates a supercritical flow with which a flowing medium has the speed of sound in the narrowest cross section of the throttle device.

11. (new) The device as claimed in claim 10, wherein a variable nozzle serves as the adjustable throttle device.

12. (new) The device as claimed in claim 11, wherein the variable nozzle (24) has a conically widening portion and a spike (26) which is arranged in the conically widening portion, and the position of the spike is adjustable by means of a drive (28) in the conically widening portion, in order to change a free cross section of the conically widening portion.

13. (new) The device as claimed in claim 12, wherein the spike (26) has the form of a cone or truncated cone which is arranged centrally in the conically widening portion.

14. (new) The device as claimed in claim 13, wherein the position of the spike is adjustable along a longitudinal axis (B) of the throttle device.

15. (new) The device as claimed in claim 10, further comprising sensors (18, 20, 22) for sensing state variables of mass flow of the flowing medium, the sensors being arranged between the holder of the air mass sensor and the throttle device.

16. (new) The calibration device as claimed in claim 10, further comprising measuring devices for measuring temperature, relative atmospheric humidity and/or pressure.

17. (new) A method for calibration of a mass flow sensor (14), comprising the following steps:

- arranging a mass flow sensor to be calibrated, in a flow channel,
- generating a mass flow corresponding to a mass flow/time profile in the flow channel,
- passing the mass flow through a throttle device with a supercritical flow with which the flowing medium has the speed of sound in the narrowest cross section of the throttle device.

18. (new) The method as claimed in claim 17, wherein an adjustable nozzle is provided to serve as the throttle device, the adjustable nozzle varying the mass flow past the mass flow sensor to be calibrated in a way corresponding to a predetermined time curve.